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MicroBooNE's Search for a Photon-Like Low Energy Excess

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MicroBooNE is a Liquid Argon Time Projection Chamber which has been taking neutrino data at Fermilab's Booster Neutrino Beamline since October 2015. One of its primary goals is to investigate the "Low Energy Excess" of neutrino events observed by the MiniBooNE experiment, for which candidate interpretations include an underestimation of neutrino neutral current (NC) resonant Δ production with subsequent radiative decay or another anomalous source of single photon production in neutrino interactions. NC Δ radiative decay could be a sizable contribution to the "Low Energy Excess". This talk will present the status of the analysis developed to search for NC Δ radiative events in MicroBooNE, consisting of a boosted decision tree based event selection with a NC neutral pion background constraint.

Summary

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